



## BOSTON and MAINE RAILROAD

North Station
BOSTON 14, MASSACHUSETTS

Notice to Stockholders:

Your attention is particularly invited to page 5 of the Annual Report, wherein mention is made of legislation bearing on your company's stock simplification problem.

E. S. FRENCH

President.

March 15, 1948.



# Jo the Owners of

# THE BOSTON AND MAINE RAILROAD

In the following pages you will find a summary of your company's operations and activities during the year 1947, with statements of the financial results thereof.

Your management will be happy to furnish information concerning any items that may be of special interest.

Photo: Getting ready for day's work; early morning at the Boston Engine Terminal

### BOARD of DIRECTORS

PHILIP R. ALLEN *  East Walpole, Mass.	JAMES GARFIELD  Cambridge, Mass.
ROGER AMORY  Boston, Mass.	ALDUS C. HIGGINS  Worcester, Mass.
LOUIS M. ATHERTON * Swampscott, Mass.	HARVEY P. HOOD  Cambridge, Mass.
RICHARD L. BOWDITCH Cambridge, Mass.	ERNEST M. HOPKINS  Hanover, N. H.
HUGH J. CHISHOLM * Portland, Me.	AUGUSTUS P. LORING, JR.  Beverly, Mass.
T. JEFFERSON COOLIDGE Brookline, Mass.	JOHN R. McLANE*  Manchester, N. H.
FAIRMAN R. DICK New York, N. Y.	ROY L. PATRICK *
BERNARD W. DOYLE  Leominster, Mass.	Burlington, Vt. PHILLIPS M. PAYSON
Concord, N. H.	Portland, Me. WILLIAM B. SKELTON
FREDERIC C. DUMAINE, JR.*  Weston, Mass.	Lewiston, Me.
EDWARD S. FRENCH* Springfield, Vt.	J. DUNCAN UPHAM † Claremont, N. H.
* Member Executive Commi	ttee † Died Jan. 17, 1948

### **OFFICERS**

President and Chairman of Executive Committee EDWARD S. FRENCH Assistant to President
Vice President — Finance and Accounting       W. S. TROWBRIDGE         Comptroller       G. F. GLACY         Treasurer       E. J. GALLAGHER         Director of Budgets       H. F. FRITCH
Vice President — Operations J. W. SMITH General Manager F. W. ROURKE
Vice President — Purchases and Stores A. W. MUNSTER Purchasing Agent
Vice President — Traffic . J. W. RIMMER Freight Traffic Manager . P. J. MULLANEY Passenger Traffic Manager . C. F. PALMER
Chief Engineer T. G. SUGHRUE  Assistant Chief Engineer C. S. ROBINSON
General Counsel         R. J. FLETCHER           General Attorney         J. B. SAWYER           General Attorney         R. JACKSON
Clerk of Corporation

### TRANSFER AGENTS

For all classes of stock
OLD COLONY TRUST COMPANY,
45 MILK ST., BOSTON, MASS.
For common stock
GUARANTY TRUST COMPANY,
140 BROADWAY, NEW YORK CITY







INCOME			
	1947	Increase or Decrease from 1946	Per
Operating Revenues	\$84,277,139 65	\$7,109,989 94	9.21
Operating Expenses	66,484,620 46	2,358,297 10	3.68
Net Revenue from Operations	\$17,792,519 19	\$4,751,692 84	36,44
Railway Tax Accruals	8,271,598 51	3,184,447 87	62.60
Railway Operating Income	\$ 9,520,920 68	\$1,567,244 97	19.70
Equipment and Joint Facility Rents - Net Dr	3,590,403 11	133,702 03	3.87
Net Railway Operating Income	\$ 5,930,517 57	\$1,433,542 94	31,88
Other Income	820,085 16	d 551,059 96	40.19
Total Income	\$ 6,750,602 78	\$ 882,482 98	15.04
DEDUCTIONS	S		
Rental Payments — Fixed.	\$ 698,413 99	d \$ 282,647 24	28_81
Interest on Debt — Fixed	2,733,912 90	d 39,896 38	1.44
Interest on Unfunded Debt	20,235 23	8,128 68	67.14
Other Deductions	101,809 19	d 34,685 51	25.41
Total Deductions	\$ 3,554,371 24	d\$ 349,100 45	8.94
Income After Fixed Charges	\$ 3,196,231 49	\$1,231,583 43	62 69

d Indicates decrease.

### Income after Fixed Charges (Available Net Income)

has been allocated in accordance with Mortgage Indentures to the following purposes:

Sinking Fund for Redemption of Series RR BondsInterest on Income Bonds Series A:		\$ 679,102	00
Unearned for period, Jan. 1 to Dec. 31, 1945 at $4\frac{1}{2}\%$ (A)	\$1,248,583 68		
Accrued for period, Jan. 1 to Dec. 31, 1947 at $4\frac{1}{2}\%$	1,215,180 02	2,463,763	70
Sinking Fund for Redemption of Series A Bonds (B)		53,365	79
Total		\$3,196,231	49

### Notes:

A — Represents 1945 unearned interest on Series A Income Bonds. The Directors at their meeting on January 29, 1946, authorized the payment of 1945 interest in full @ 4\2\70 on May 1, 1946, this unearned interest to be deducted from subsequent earnings. This sum credited to Profit and Loss in 1947 to offset charge to Profit and Loss in 1945.

B — Sinking Fund for Series A Income Bonds amounts annually to \$482,870. Earnings were sufficient to allocate only \$53,365.79 for this purpose.

### **ASSETS**

### LIABILITIES

Total investment in Transpor- tation Property less depre- ciation and amortization	\$221,674,211 87	Capital Stock and Premium	\$108,839,540	14
Investment in Affiliated Properties	7,574,754 20	Long-Term Debt	105,182,829	78
Current Assets	28,916,295 50	Current Liabilities	18,465,759	
All other assets	10,512,772 45	Surplus	34,814,812	_
	\$268,678,034 02		\$268,678,034	==

See also condensed balance sheet, pages 28-29

### CAPITAL STOCK

The number of shares of Capital Stock of all classes outstanding December 31, 1947, including fully-paid negotiable receipts for subscriptions to Prior Preference Stock, was unchanged at 1,046,113 shares, of a par value of \$104,611,300.

In the 1946 Report it was stated that a Committee of the Board of Directors had been studying the development of a fair and equitable plan for the simplification of your company's capital stock structure, and had concluded that it was not possible of accomplishment under the laws as then existing. It was further stated that the best and most feasible solution lay, in the Committee's opinion, in the enactment of Federal legislation which would compel acceptance by a small minority of a plan approved by a substantial majority of the stockholders and the Interstate Commerce Commission.

As of the time this report goes to press such legislation has been passed by the Senate, and we have every expectation that it will soon become law. Therefore your Board of Directors has reactivated its Committee above mentioned, and the Committee, assisted by officers of the company, is considering various stock recapitalization plans. We hope and expect that an appropriate plan, of benefit to the company and to you, its stockholders, can be made effective under the law.

### CHANGES IN LONG-TERM DEBT

Long-Term Debt, outstanding in hands of Public on December 31, 1947 amounted to \$99,585,829.78, a decrease of \$1,925,490.41 since December 31, 1946.

### DECREASE IN LONG-TERM DEBT

No

	Funded Debt reacquired and Canco	elled:	
	Series RR 1st Mtge. 4% Bonds		
	due 7/1/60	\$ 768,200.00	
	Series A Income Mtge. 4½%		
	Bonds due 7/1/70	61,000.00	
	Matured Funded Debt Paid Off:		
	Series FF Gen. Mtge. 5% Bonds		
	paid 1/1/47	52,000.00	
	Series GG Gen. Mtge. 5% Bonds	02,000.00	
	paid 4/1/47	13,000.00	
	Increase in Treasury Holdings of	10,000.00	
		928,200.00	
	Bonds (not cancelled)	920,200.00	
	D E LIDICILE Les f		
	Decrease Funded Debt in hands of		Ø1 922 100 00
	Public		\$1,822,400.00
	Decrease in Equipment Obliga-		
	tions account installment pay-	**********	
	ments during the year	\$3,245,090.41	
	Increase in amount of Equipment		
	Obligations account new equip-		
	ment received during the year .	3,142,000.00	103,090.41
	Net Decrease in Long-Term Debt		
	in Hands of Public		\$1,925,490.41
OT	E. — Of \$5,597,000.00 Long-Term Debt owner	ed by the Rail-	
	road, there is pledged with Old Color	ly Trust Com-	********

The chart opposite illustrates by percentage ratios based on December 31, 1940, increases and decreases by years in investment in "Road and Equipment Property" and in "Funded Debt and Equipment Obligations." During the period of years, net investment in "Road and Equipment Property" increased \$8,705,769 (from \$246,125,406 to \$254,831,175) and "Funded Debt and Equipment Obligations, in Hands of the Public" decreased \$28,293,828 (from \$127,879,658 to \$99,585,830). Funded Debt decreased \$33,703,300 and Equipment Obligations increased \$5,409,472.

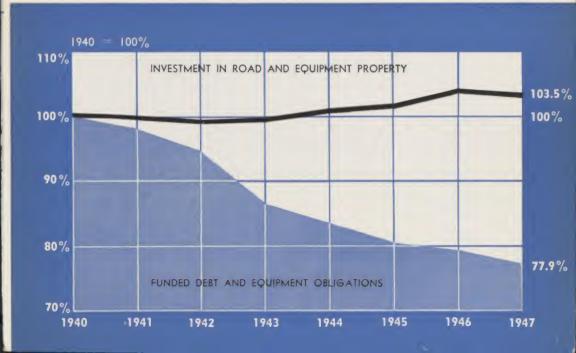
\$661,000.00

pany, Trustee, in lieu of Mortgaged Property Sold . .

### ANNUAL REPORT FOR THE YEAR 1947



The tax burden on your company in 1947 was \$8,280,598.51, equivalent to almost \$8.00 per share on each share of capital stock of all classes outstanding, and is an increase over 1946 of \$3,184,447.87. The large increase is due principally to Federal Income Taxes on our higher net income and to payroll taxes paid by the carriers to the Federal Government, namely 534% of each individual's monthly pay up to \$300 under the Railroad Retirement Act, as amended by the Crosser Act,



### BOSTON AND MAINE RAILROAD

and 3%, similarly computed, under the Railroad Unemployment Insurance Act. These two payroll taxes alone in 1947 cost your company an average of \$265.05 per employee. In addition each employee is taxed 53/4% of the first \$300. of his monthly pay under the Railroad Retirement Act but does not contribute under the Railroad Unemployment Insurance Act.

Exclusive of the taxes paid directly by the Railroad, your company, acting as an agency for the Federal Government, collected from others or withheld from its employees a total of \$11,320,784.06, consisting of transportation taxes on persons and property, employees' withholding (income) taxes and the  $5\frac{3}{4}\frac{6}{6}$ 0 assessed against the employees under the Railroad Retirement Act.



Vertical Turret Lathe, Billerica Shop, Automatically Bores and Faces Car and Locomotive Wheels

### RETURN ON INVESTMENT

In 1947, for the second successive year, your company moved a greater volume of freight than in any peacetime year in its history prior to 1946. Both gross ton miles and net ton miles were but 1% under 1946, when the previous high for a peacetime year (1929) was exceeded by 7.6%.

Despite this relatively large volume of business the Return on Investment in 1947 was only 2.3%, as shown below:

Gross Revenues	\$ 84,277,140 66,484,621	1946 \$ 77,167,149 64,126,323		1939 \$ 46,341,082 33,133,913	
Net Revenue	\$ 17,792,519	\$ 13,040,826	36.4	\$ 13,207,169	34.7
Railway Tax Accruals Equipment Rents Joint Facility Rents	\$ 8,271,599 3,295,411 294,992	\$ 5,087,151 3,185,716 270,985	3.4	\$ 3,519,723 2,548,171 184,133	29.3
Deduction from Net Revenue	\$ 11,862,002	\$ 8,543,852	38 8	\$ 6,252,027	89.7
Net Railway Operating Income (A) Investment in Transportation Property including Cash and	\$ 5,930,517	\$ 4,496,974	31 9	\$ 6,955,142	d 14.7
Material and Supplies, less Recorded Depreciation and Amortization (System) (B)	\$254,644,131	\$250,506,57	71 1.7	\$253,336,974	0.5
Rate of Return (See Note)	2 3%	1.8%		2.7%	
A 1 (1 (1 ) )   A 1 (1					

NOTE: The Rate of Return is the percentage of  ${\bf A}$  to  ${\bf B}.$  d Decrease

The failure of operating results to reflect a gain in Return on Investment comparable with increased revenues is due almost entirely to the time lag between the rise in operating costs and the granting of authority to increase freight and passenger rates. For instance, straight time earnings, plus payroll taxes, for all classes of this company's employees steadily increased until today they are 76% above 1939, while materials and supplies during the same period have advanced approximately 78%. On the other hand, not until recently were the railroads permitted to increase rates, and then not in proportion to increased operating costs.

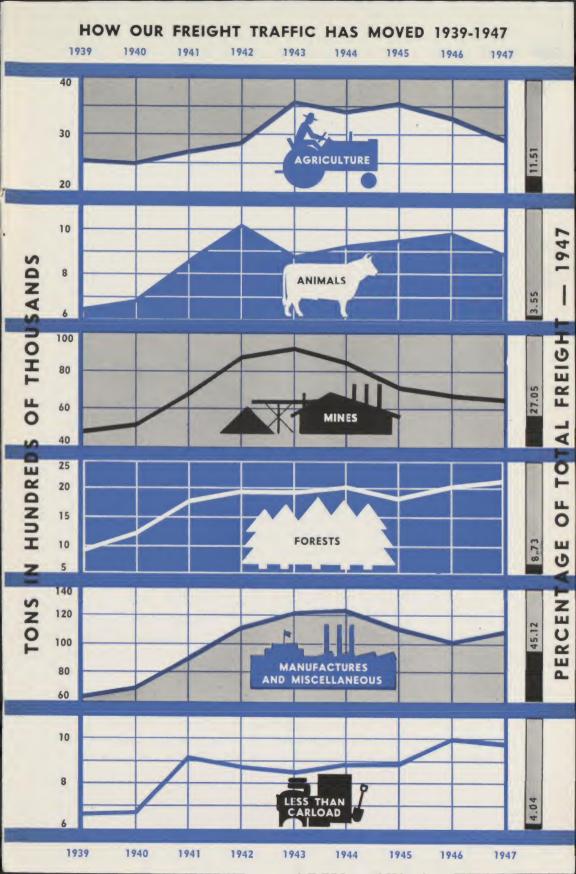


Freight revenue for the year was \$61,259,600.94, 13.9% above 1946 and the highest in Boston and Maine history. Revenue tons of freight handled were 23,892,658, 1.2% above 1946. The average revenue per net ton was \$2.56, 12.3% above 1946 and another all-time high.

Although there was considerable change in the character of our traffic the total volume handled was almost the same as in the preceding year. That our freight revenue reached an all-time high was due to the general increase in freight rates which became effective on January 1, 1947, and the later emergency charge which increased our revenue during the last two and a half months of the year.

All-rail coal showed a decline of about 8% from the previous year. All-rail bituminous coal moved at about last year's level but anthracite declined, due partly to difficulties in car supply. A shortage of tank cars also affected the movement of petroleum products from ports to the interior, causing a decline from the previous year which became more rapid as the year progressed. The movement of general consumer goods continued strong, though a nationwide shortage of box cars resulted in some loss of traffic.

On January 1, 1947 the permanent increases in freight rates and charges allowed by the Interstate Commerce Commission in Ex Parte 162–148 became effective and increased the freight rate level approximately 17½% above the level that existed immediately prior to July 1, 1946, when the temporary increase, averaging for this company about 7½%, went into effect. On July 3, 1947 the railroads of the country petitioned the Commission for additional increases which, in our territory, were based on a general increase of 28%, with exceptions on some commodities, and which were expected to yield this company an average increase in revenue of about 18%. On September 5, because of the general Wage Award to the non-operating groups, effective September 1, the carriers petitioned for further increases and on December 3, as a result of the actual and anticipated awards to the operating groups, an additional amount was sought to make the total base increase in our



area 41%, which, on account of the exceptions on certain commodities, was expected to yield an increase of about 30% in freight revenue. These petitions are still before the Interstate Commerce Commission under Ex Parte 166, but effective October 13, 1947, the Commission granted the carriers a temporary increase of 10% in the form of an emergency charge, the only exceptions being on coal, coke and iron ore, on which specific increases less than 10% were permitted. At the end of the year the Commission allowed the carriers to increase this emergency charge to 20%, with similar exceptions on coal, coke and some kinds of ore, and the increase went into effect on January 5, 1948. All of the State Commissions in our territory have permitted both of these increases on intrastate traffic.

The adjustment of class rates ordered by the Interstate Commerce Commission in the spring of 1945 in Docket 28300, but stayed by Court order, was upheld by the Supreme Court and went into effect on August 22, 1947. To your company the revenue effect of the adjustment is slight as it applies on only a small percentage of our traffic.

During the year the United States Department of Justice filed a number of formal complaints with the Interstate Commerce Commission, alleging that the railroads had made unreasonable charges for the transportation of various supplies and materials of war during the recent conflict. Collectively the amounts sought from the railroads are enormous, and your company is involved to a considerable extent, particularly with the charges on ammunition and explosives, and on transit shipments, which we handled in substantial quantities. We are participating with the other carriers in vigorously defending the charges collected.

## INDUSTRIAL DEPARTMENT

Industrial development in the territory served by your company continued at a high level throughout 1947. Ninety-eight new industries, with traffic estimated at 26,000 cars per year were established on the company's lines during the year. Forty new plants, or additions to existing plants, were under construction during the year, with new floor space of approximately 2,000,000 square feet. Plans were made by various industries for the construction of 27 new plants in Boston and Maine territory in 1948. There were 29 sales of Railroad-owned land for industrial purposes, involving over 1,500,000 square feet, and new private sidetrack installations, totaling 21,874 feet of track, were completed or authorized.



Passenger revenue for the year was \$15,225,632.77, a decline of 9.1% from 1946. The number of passengers carried declined from 29,414,024 in 1946 to 26,318,719 in 1947, or 10.5%. There was a continuing though anticipated decline in general passenger traffic, augmented by the fact that there was almost no movement of discharged or furloughed servicemen, which alone contributed almost a million dollars to our passenger revenue in 1946.

On June 1, 1947 the basic coach fare was increased from 2.2¢ to 2.5¢ per mile and the first class fare, charged in parlor and sleeping cars, was increased from 3.3¢ to 3.5¢ per mile. During the five months of 1947 prior to the increase, the revenue from these classes of traffic declined 8.9% and the number of passengers declined 13.4% as compared with the previous year. During the five months subsequent to the increase the corresponding revenue decline was 5.1% and in the number of passengers 17.4%, indicating that while the increase tended to discourage rail travel to some extent, it improved the revenue.

On October 27, 1947, a general increase was made in our commutation rates, varying from 25% in the 60 ride and monthly pupils' tickets to 15% in the new 46 ride monthly ticket which the Railroad was ordered to provide in recognition of the more general 5-day working week, and in the case of the 5 and 12 ride tickets generally used for the shorter distances the increase was 20%. There has been no indication that these new rates have adversely affected commuter traffic, which showed an increase over the preceding year for the sixth consecutive time.

The purchase of eight new streamlined coaches, two combination baggage cars and two restaurant-lounge cars by your company, and a similar purchase of identical cars by the Maine Central, made it possible to supply most of the trains between Boston and Bangor with some of this modern equipment, beginning early in the summer. The public response to this improvement has been gratifying.

No important changes were made in train schedules except in some of the summer services. The BAR HARBOR between Washington and Ellsworth was operated three days a week in each direction as compared with six days a week in 1946, and the EAST WIND, operated in 1946 between Washington and Rockland, ran in 1947 only between New York and Portland. Our week-end summer service from Boston to the Maritime Provinces was improved by the addition of through sleeping cars and coaches operating on the PINE TREE Friday nights from Boston to Bangor and reaching Saint John, N. B. early Saturday morning to connect with the Canadian Pacific boat for Digby, N. S. and Canadian National trains east from Saint John. This proved extremely popular. The sleeping car service between New York City and points in the Upper Connecticut Valley was also improved.

In coordination with other rail carriers and under arrangements made by the Association of American Railroads, we handled the "Freedom Train" over a large part of our system during the fall. The train was displayed at many points on our line and attracted large numbers of people, particularly school children.



New Wheel-turning Lathe at Billerica Shops

### MILK TRAFFIC

Milk revenue was \$1,259,086.04, an increase of 4.5% over 1946 although the volume handled declined 2.9%. The reduction in volume was caused by lower consumption rather than by diversion of traffic away from the rails.

The increase in revenue was the result of increased rates authorized by the Interstate Commerce Commission. On January 1, 1947, in its permanent order in Ex Parte 162–148, the Commission authorized an increase of 15% over the rates in effect prior to July 1, 1946 when its temporary order permitted an increase of 8%. On October 13, 1947 a 10% interim emergency increase authorized by the Commission went into effect, and this was increased to 20% effective January 5, 1948.

### **EXPRESS TRAFFIC**

Revenue from express traffic increased from \$286,288.11 in 1946 to \$1,089,053.66 in 1947.

As the railroad's revenue from this source depends upon the excess of the Railway Express Agency's revenue over its expenses, any increase or reduction in the Agency's net revenue is quickly reflected in its payments to the railroads.

The improvement during 1947 was the result of the rate adjustment of December 13, 1946 which increased the rates an average of about 17 ½%, and another increase effective October 25, 1947 of approximately 36%. A further increase has been sought, and temporary authority was granted to increase the first and second class rates 10% effective January 22, 1948. There has been a noticeable diversion of the small package express business to parcel post but it is doubtful if this has adversely affected the Express Agency's net revenue.

# PURCHASE BY RAILROADS OF THE PULLMAN COMPANY

In 1947 the sale to a number of railroads of the capital stock of The Pullman Company by Pullman, Incorporated was consummated. It had been delayed for over a year and a half by an appeal to the Supreme Court of the United States by parties opposing the transaction, but that Court finally affirmed the decree permitting the sale. Approximately fifty railroads, of which the Boston and Maine is one, now own all of the capital stock of The Pullman Company, which owns a majority of and operates all the sleeping cars in the country. With the authorization of

the Interstate Commerce Commission the operations of that company will be continued for a time in the same manner as in the past, but the plan contemplates the eventual reduction of the company to an agency to supply cars from a pool to railroads having need of extra equipment, and to service and maintain such railroad-owned sleeping and parlor cars as the individual roads may desire. The future method of operation of sleeping car service by your company is under active study at the present time.

### PER DIEM DEVELOPMENTS IN 1947

The amount of rent to be paid by a railroad for the use of another road's freight cars, customarily called a per diem payment, is a matter of great importance to your company since, by the nature of its operations, it ordinarily has many more freight cars on its line than it owns, and is therefore a debit road with respect to per diem. The rate of payment was \$1. per car per day for many years until February 1, 1945 when it was changed to \$1.15. During 1947 the rate was twice further changed, both times by vote of the owners of a great majority of the freight cars in the country. Such rate became \$1.25 on June 1 and \$1.50 on September 1.

Although the rate of per diem payments has always been fixed by agreement in the past, the Interstate Commerce Commission has jurisdiction to determine, on complaint of a railroad, just compensation for the use of freight cars. Accordingly, a number of short lines filed such a complaint, asserting the rate was higher than could be justified and asking the Commission to fix a reasonable rate. Believing the successive rates mentioned above were and are greater than the per diem cost of owning a freight car, the Boston and Maine, as well as certain other Class I railroads, intervened and actively participated in the proceeding on the side of the short lines. Six western railroads filed a similar complaint with the Commission, asserting the present rate is not high enough. These two complaints were consolidated and hearings were held in June, 1947, November 1947 and January 1948. Briefs and oral arguments will follow and a decision by the Commission is expected during the present year.

In addition to these proceedings, the Interstate Commerce Commission undertook an investigation of its own for the purpose of determining whether or not a higher per diem rate would bring about the faster movement of freight cars and a consequent easing of the car

### ANNUAL REPORT FOR THE YEAR 1947

shortage. This investigation resulted in a decision by the Commission ordering into effect for six months commencing October 1, 1947 a per diem rate of \$2., not because this was found to be the proper rate on a cost basis, but to act as an incentive to faster car-handling. A number of railroads, including your company, attacked this order in the United States District Court for the District of Columbia, and that court enjoined the order on the grounds it was beyond the Commission's powers. As a result the \$2. rate was never effective and your company was saved a substantial amount of additional expense.

### MAIL PAY INCREASE

In its Order of December 4, 1947, the Interstate Commerce Commission granted a 25% increase in the revenue accrued to the railroads for carrying the mail for the period from February 19, 1947, to January 31, 1948, and as of February 1, 1948, the Order authorized a 25% interim increase in individual rates of mail pay to remain in effect until further Order of the Commission.

During 1947 there was a sizeable increase over 1946 in the volume of mail handled by your company, due in substantial measure to the increase in express rates, which had a tendency to transfer to mail service some of the traffic formerly handled by the Railway Express Agency.



Taking on sand at Boston Terminal

### **ACQUISITIONS AND ABANDONMENTS**

The purchase by your company of the physical properties and franchises of the Pemigewasset Valley Railroad, which was authorized by the Interstate Commerce Commission in the last days of 1946, was completed in 1947, thus reducing the rental payments by your company for leased lines and further simplifying the corporate structure of the Boston and Maine System.

For some years your company has been operating from East Deerfield to Turners Falls, Massachusetts, in common with the New York, New Haven & Hartford Railroad Company over a line owned by the latter company. The Turners Falls Branch of the Vermont & Massachusetts Railroad Company, which company is leased to the Boston and Maine, has been out of operation for several years due to severe flood damage to the bridge by which the line crosses the Connecticut River. With the approval of the Interstate Commerce Commission your company purchased the New Haven's line for the account of the Vermont and Massachusetts, and as a consequence, the Boston and Maine now carries all of the rail traffic to and from Turners Falls. The Interstate Commerce Commission at the same time authorized the abandonment of the old branch, there being no need for it since it parallels the line purchased. This authorization by the Commission gives assurance that there will never be the necessity of restoring the demolished bridge which would have been an expensive undertaking.

### **OPERATING RESULTS**

The volume of freight traffic in the year 1947, as measured by Gross Ton Miles, was within 1.0% of the corresponding figure for the year 1946, the all-time high for any peacetime year in the history of the Railroad. Gross Ton Miles per Train Hour were not as high as the peak performances of the war years, when the volume of traffic was much higher, but reached an average of 34,393 or 1.1% above the average of 34,035 for 1946. This performance is the combined result of both Diesel and Steam operation, Diesel locomotives operating 59.5% of total freight train miles and accounting for 81.3% of total Gross Ton Miles in 1947.

Net Ton Miles per Car Day, the measure of efficiency of freight car utilization, also remained under the wartime peaks, as was to be expected. However, at an average of 844 it was 10.2% higher than the figure of 766 in 1946, despite severe freight car shortages and mandatory orders by governmental agencies and the Car Service Division of the

Association of American Railroads, compelling the sending of empty freight cars off our lines to other sections of the country and making it difficult to meet the normal requirements of our local industries. To state it another way, the 1947 freight volume was handled with 10.3% fewer freight cars than in 1946.

Fuel consumption in Diesel freight service remained at 1.5 gallons per 1000 Gross Ton Miles, the same as in 1946, and in Diesel passenger service fuel consumption was likewise the same as in 1946, or 0.27 gallons per Passenger Train Car Mile.

The year 1947 was the first full year of Diesel passenger locomotive operation when 2,419,494 Diesel locomotive miles were operated as compared with 1,191,298 such miles in 1946, resulting in a substantial reduction in the more expensive steam locomotive miles. Nearly all through passenger trains on this Railroad are now operated with Diesel power. Through an Operating Agreement with the Maine Central Railroad some of your company's Diesel locomotives operate over the lines of the Maine Central between Portland and Bangor, while Maine Central Diesels operate an equal number of miles over the lines of the Boston and Maine. This results in economy of operations and better utilization of locomotives for both companies. Other important main line trains between Boston and White River Junction, Vt., Boston and Troy, N. Y., and between Springfield, Mass., and White River Junction, Vt., are also operated with Diesel power.

Certain of our Diesel freight locomotives are equipped with boilers to furnish steam heat, thus making them available for heavy passenger train operations whenever the requirements of the respective services warrant.

## CHANGES IN EQUIPMENT

Steam locomotive ownership at the end of 1947 was 333. During the year 44 were sold or retired.

Diesel power ownership remained at 102 units. Diesel power on order is as follows:

4 — 2000 H. P. Road passenger units

2 — 3000 H. P. Road freight units

1 — 1500 H. P. Road Switcher

4 — 660 H. P. Switchers

1 — 44-ton Switcher

It is expected that most of these Diesels on order will be delivered in 1948 and delivery will make possible complete dieselization of through

### BOSTON AND MAINE RAILROAD

service, both passenger and freight, west of Greenfield and between Springfield and White River Junction.

Revenue freight car ownership at the end of 1947 was 6154. During the year 500 50-ton capacity steel box cars were received.

Deductions during 1947 were 413 cars retired on account of age and condition, 15 cars accidentally destroyed on foreign lines, 12 cars sold and 71 cars converted to non-revenue service.

The application of A.B. brakes ordered by the Interstate Commerce Commission continued and 5419 cars, or 88.5% of ownership, are now equipped. The balance of interchange cars, 705, will be equipped as they are returned to our line. Under the Interstate Commerce Commission order all interchange cars must be equipped with A.B. brakes before January 1, 1949.

Ownership of passenger train cars on December 31, 1947, was 1222. Additions during the year were 12 stainless steel de luxe cars, 10 combines, and 45 troop sleepers, the latter acquired for conversion to baggage cars.

Sixteen steel underframe cars were retired because of age and condition, 15 cars were converted for non-revenue service, one destroyed by fire, and one sold. Four gas-electric motor cars purchased in 1926 were retired.

In addition, 33 cars built prior to 1911 have been set aside for retirement or conversion, and approximately 130 others will be taken out of service as they become due for heavy repairs.

Additions to non-revenue equipment during the year were 2 Gas Cranes purchased and 87 cars converted from passenger and freight equipment. Fifty-two cars were retired because of age and condition.



Type of f ormer troop sleeper converted to baggage car.



On March 25, 1947 all Class I Railroads were served with nation-wide demands by 17 non-operating railroad labor organizations for a wage increase of 20¢ an hour to be effective April 25, 1947. After many conferences between representatives of the carriers and representatives of the unions, as a result of which the demands were refused, the dispute was referred to the National Mediation Board. In the mediation proceedings your company was represented by a committee appointed to represent all the Eastern carriers and to work with similar committees from other sections of the country.

The mediation efforts also failed, whereupon both sides agreed to submit the dispute to an Arbitration Board, consisting of 2 representatives of the carriers, 2 representatives of the unions and 2 representatives of the public, the decision of a majority of the Board to be final.

Arbitration proceedings commenced on August 4, 1947 and continued until September 2, when a majority of the Board, the two carriers' representatives dissenting, made its award, granting an increase of 15½¢ an hour effective from September 1, 1947. This increase was immediately put into effect by your company and it is estimated will result in an annual increase in wage costs for that particular group of about \$5,269,000 including payroll tax.

Meanwhile, on June 20, 1947, 5 operating unions, those concerned with train and engine operations, renewed the demands of the previous year for changes in 44 rules covering working conditions. It was the denial of these 44 rule changes which precipitated the 1946 nation-wide railroad strike. At the same time your company and other carriers served notice of their intention to change 24 rules.

In addition to the rule changes demanded, these 5 operating unions, on September 30, served notice of a demand for a 30% increase in wages with a minimum increase of \$3.00 per day.

None of the carriers were able to reach an agreement with their local committees and the demands were referred to a Conference Committee for further negotiation with union officials. On November 14 the

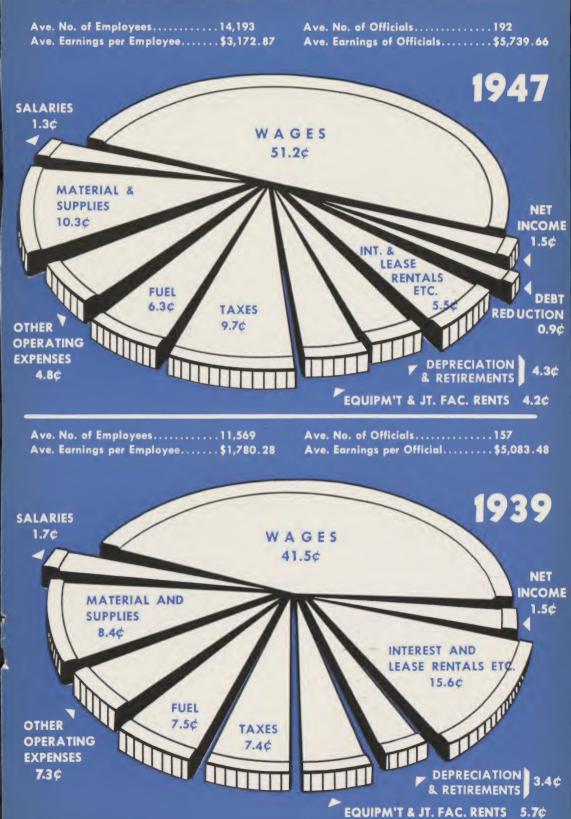
Order of Railway Conductors and the Brotherhood of Railroad Trainmen reached an agreement with the carriers on the basis of an increase of 15 ½¢ an hour, the same as was granted to the non-operating unions, retroactive to November 1, 1947. It is estimated that for this group our annual increase in payrolls, including payroll tax, will be \$977,294. Also an agreement was reached with those 2 unions in which 8 of the 44 rule changes demanded by the unions were granted and 5 rule changes demanded by the carriers were referred back to the individual roads for further negotiation with local committees. The balance of the rule changes demanded by both sides were withdrawn.

The Brotherhood of Locomotive Engineers, the Brotherhood of Locomotive Firemen and Enginemen and the Switchmen's Union of North America would not accept the 15½¢ per hour increase and demanded more. Neither would they accept the rule changes agreed to between the other two operating unions and the carriers, although members of the Brotherhood of Locomotive Engineers and Brotherhood of Locomotive Firemen and Enginemen are predominantly among the highest paid of all railroad labor. The Switchmen's Union of North America represents only about 7% of all railroad switchmen, the remainder being represented by the Brotherhood of Railroad Trainmen which had already accepted the 15½¢ award. The switchmen on the Boston and Maine are represented by this latter union.

The carriers immediately invoked the services of the National Mediation Board, and when it became apparent that no agreement could be reached through mediation, the carriers agreed to submit the dispute to a Board of Arbitration. During the mediation proceedings the 3 dissenting unions had called for a strike vote of their memberships and after refusing to arbitrate announced that a strike would be called effective February 1, 1948. The Chairman of the Mediation Board thereupon announced he would advise the President of the United States that an emergency existed.

On January 30th the President of the United States appointed a Fact Finding Board, the effect of which will be to avert a strike for a period of 60 days at least. The Fact Finding Board started hearings in Chicago early in February, after which it will make its recommendations to the President. Although its recommendations are not mandatory, the theory is that the force of public opinion will compel settlement on the basis of the recommendations.

# DISTRIBUTION OF THE INCOME DOLLAR





### ADDITIONS AND BETTERMENTS

Approximately 2500 tons of new 112 lb. rail were laid during the year on the Fitchburg and New Hampshire Divisions; 41.6 track miles of existing stone ballast were resurfaced on the Fitchburg and Portland Divisions; 232 track miles of existing stone ballast were machine cleaned, and 1221 track miles of main lines and important branches were inspected for hidden rail defects by means of a rail detector car. Riprap totaling 4700 tons was placed during the year for embankment protection.

One steel track bridge and one part steel and part wood trestle were rebuilt while one stone arch track bridge was reinforced. On three track bridges walkways were installed to protect trainmen, and additional fire protection was installed on one track bridge. Two steel bridges were retired and openings filled, one over an abandoned railroad right-of-way and one over a closed highway. Two overhead highway bridges were rebuilt, and one new steel and concrete highway bridge was constructed by the Maine Turnpike Authority over the main line of the Portland Division near Wells Beach, Maine.

An extensive program for the installation of modern automatic flashers and combination of flashers and automatic half gates for crossing protection was begun during the year with the approval of State authorities, twenty-six such projects having been completed despite difficulty in obtaining necessary material. This pro-

One of many latest type Automatic Flasher Signals and Half-Gates installed at a number of grade crossings on the Boston and Maine.

gram will be continued in 1948, as this form of crossing protection has proved to be more economical and more satisfactory from a safety standpoint than manual protection in many locations. One grade crossing was eliminated by closing at Newton Jct., N. H., and two crossings were reclassified from private to public, one at Lakeport, N. H., and one at the Littleton, N. H., airport.

A modern centralized traffic control signal system, with necessary track changes, permitting the retirement of three less modern signal towers and two interlocking plants, was partly completed during the year. When fully completed in 1948 this project, centering at Lowell, Mass., will control train and engine movements over 27 miles of road.

The program of installing color light signals, respaced for more adequate braking distances, and replacing old style semaphore signals, was continued in 1947; four modern car retarders at the Boston Hump Yards replaced six old type retarders; at Mechanicville, N. Y., two-way radio communication between the Yardmaster's office and five Diesel switchers was put into service; and a program of installing reflector buttons on all roadway signs on the Fitchburg Division main line was completed from Boston, Mass., as far as Hoosick, N. Y. At Portsmouth, N. H., extensive yard track changes improved operating conditions and permitted the discontinuance of Newburyport, Mass., as

Type of modern Color Light Interlocking Signal rapidly replacing old type semaphore signals on the Boston and Maine.

an engine terminal. At other yards on the system additional tracks were installed and others extended.

At Somerville, Mass., construction of a new modern Diesel shop was completed and placed in operation early in 1948. Numerous improvements were made in various other buildings of all types; flange oilers, switch heaters, flood lights and many other improvements too numerous to mention were installed at various points, all adding to the efficiency and economy of operations.

The practice of retiring unused buildings, structures and sidetracks was continued throughout the year to save maintenance and obtain the benefit of salvaged timber, steel and other materials.

Approximately 12,500 cu. yds. of filling material were placed in Boston Terminal areas.

### MATERIALS AND SUPPLIES

The total cost of all materials and supplies purchased during the year, including fuel oil and locomotive coal but excluding equipment purchases, was \$13,831,457. as compared with \$12,575,495 in 1946. The procurement of practically all supplies proved difficult. Though the production of bituminous coal was great, so was the demand, and our inability to procure the better quality coal and to build up a reasonable stock for winter use was due to a continuous shortage of coal cars at the mines throughout the year. Fuel oil was in short supply and difficult to obtain.

The tonnage of locomotive coal purchased was 494,000 net tons at an average cost f.o.b. line of road of \$6.634 per net ton, as against 583,000 net tons and an average line-of-road price of \$6.02 per net ton in 1946. Purchases of fuel oil totalled 19,533,348 gallons at an average price of 7.57¢ per gallon, as compared with 14,699,773 gallons purchased at an average price of 6.33¢ per gallon in 1946.

The average weighted increase in the price of all materials and supplies as of December 31, 1947 was 10.2% above the December 31, 1946 level, and 69.6% above the June 1, 1941 level.

## SALE OF HOOSAC DOCKS PROPERTY

During the latter part of 1946 negotiations were begun with the Commonwealth of Massachusetts, acting through the Port of Boston Authority, for the sale to the Commonwealth of your company's Hoosac Docks property in the Charlestown District of Boston, as part of a general program by the Commonwealth for the improvement of Boston's

## ANNUAL REPORT FOR THE YEAR 1947

waterfront facilities. Papers were finally passed in May 1947 by which we conveyed to the Commonwealth about 14.72 acres of land with the buildings, structures and sidetracks thereon, but not including the Hoosac Grain Elevator or Grain Galleries. It is the purpose of the Commonwealth, acting through the Port Authority, to construct modern pier facilities at this location, which the Railroad has agreed to lease and operate. Negotiations are also proceeding for the sale to the Commonwealth of the Hoosac Grain Elevator property, and the subsequent lease of that property by the Railroad after extensive improvements in that facility have been completed by the Commonwealth.

Mr. James Duncan Upham, of Claremont, New Hampshire, the senior member of your Board of Directors, both in age and in years of service, having served continuously from October 8, 1913, died on January 17, 1948.

One of New Hampshire's outstanding citizens, and a leading business man of that State for many years, his passing is keenly felt and greatly regretted by his associates on the Board.

Your Board of Directors takes pleasure and pride in gratefully acknowledging the fine cooperation of its customers, both freight and passenger, as well as the loyalty and efficiency of its officers and employees throughout the year.

For the Board of Directors

Boston, Massachusetts, March 15, 1948.

President

	Dec. 31, 1947	Dec. 31, 1946
ROAD AND EQUIPMENT		A.O. 400 404 M2
Investment in Road	\$186,030,616 82	\$184,603,196 73
Investment in Equipment	60,944,943 89	61,386,483 37
investment in Equipment		
Total	\$246,975,560 71	\$245,989,680 10
	12 201 106 05	12 042 720 60
Improvements on Leased Property	13,381,496 85	13,942,729 69
Acquisition Adjustment	c 5,525,883 04	c 4,935,917 35
Donations and Grants	c 72,923 61	c 69,997 60
Total Investment in Transportation Property	\$254,758,250 91	\$254,926,494 !84
	00 107 101 11	00 101 100 11
Accrued Depreciation — Road and Equipment	c 22,405,134 11	c 23,464,172 14
Accrued Amortization of Defense Projects — Road	10 200 001 00	10.052.102.05
and Equipment	c 10,678,904-93	c 10,653,192 05
Investment in Transportation Property less Re-		
Investment in Transportation Property tess Re-	\$221,674,211 87	\$220,809,130 65
corded Depreciation and Amortization	0221,071,211 01	0220,000,100
C' 1' . P 1-	3,255 25	3,114 79
Sinking Funds	1,341,568 88	919,344 27
Capital and Other Reserve Funds	414.651 76	403,288 80
Miscellaneous Physical Property		7,514,620 85
Investments in Affiliated Companies	7,574,754 20	
Other Investments	18,208 37	22,452 28
Total Investments	\$231,026,650 33	\$229,671,951 64
CURRENT ASSETS		
Cash	\$ 9,254,860 99	\$ 6,710,489 94
Cash	944,709 30	745,044 85
Temporary Cash Investments	6,015,000 00	6,115,000 00
Curried Deposits	1,343,963 60	2,114,472 99
Special Deposits	92,655 00	11,000 00
Loans and Bills Receivable	2,078,872 17	2,064,329 89
Net Balance Receivable from Agents and Conductors	2,977,999 82	3,088,095 20
Miscellaneous Accounts Receivable	5,266,174 99	4,885,437 39
Material and Supplies	84,093 89	136,902 23
Interest and Dividends Receivable		
Accrued Accounts Receivable	677,610 15	449,453 10
Other Current Assets	180,355 59	45,010 69
	A 20 044 205 50	0.26.265.226.29
Total Current Assets	\$ 28,916,295 50	\$ 26,365,236 28
DEPENDED ACCETTO		
DEFERRED ASSETS	\$ 16,943 09	\$ 13,827 58
Working Fund Advances		1,757,226 97
Insurance and Other Funds	1,670,366 08	452,941 90
Other Deferred Assets	391,760 03	432,941 90
Total Defended Locate	\$ 2,079,069 20	\$ 2,223,996 45
Total Deferred Assets	3 2,079,009 20	
UNADJUSTED DEBITS		
	\$ 187,954 50	\$ 184,080 65
Prepayments	446,687 51	482,274 89
	820,176 98	544,797 76
Other Unadjusted Debits	5,201,200 00	3,757,000 00
Securities Issued or Assumed — Unpledged	3,201,200 00	3,737,000 00
Total Unadjusted Debits	\$ 6,656,018 99	\$ 4,968,153 30
Total Changustea Deous	9 0,030,010 99	4,700,100 00
Grand Total	\$268,678,034 02	\$263,229,337 67
Grand Lords	2200,010,001 32	,200,223,007 07

# Liabilities

CAPITAL STOCK	Dec. 31, 1947	Dec. 31, 1946
Common Stock — 395,051 shares	\$ 39,505,100 00 3,149,800 00 38,817,900 00	\$ 39,505,100 00 3,149,800 00 38,817,900 00
Prior Preference Stock (Includes Negotiable Receipts)	23,138,500 00	23,138,500 00
Total Capital Stock	\$104,611,300 00 4,227,040 14	\$104,611,300 00 4,227,040 14
Total Capital Stock and Premiums	\$108,838,340 14	\$108,838,340 14
Stock Liability for Conversion	\$ 1,200 00	\$ 1,200 00
LONG-TERM DEBT Funded Debt Unmatured Equipment Trust Certificates Lease and Purchase Agreements — Equipment	\$ 93,642,400 00 348,000 00 11,192,429 78	\$ 94,536,600 00 522,000 00 11,121,520 19
Total Long-Term Debt	\$105,182,829 78	\$106,180,120 19
CURRENT LIABILITIES Traffic and Car Service Balances — Net Payable . Audited Accounts and Wages Payable . Miscellaneous Accounts Payable . Interest Matured Unpaid . Dividends Matured Unpaid . Unmatured Interest Accrued . Accrued Accounts Payable . Taxes Accrued . Other Current Liabilities	\$ 4,868,388 07 3,663,239 32 2,392,624 76 1,308,595 38 13,503 62 1,305,168 83 766,654 00 4,105,782 29 41,803 20	\$ 4,396,325 78 2,777,250 65 2,068,064 65 1,336,958 83 13,503 62 1,338,310 53 530,105 05 2,217,034 66 49,496 79
Total Current Liabilities	\$ 18,465,759 47	\$ 14,727,050 56
DEFERRED LIABILITIES  New York State E.G.C. Projects	\$ 341,359 94 89,064 59	\$ 349,933 65 46,776 08
Total Deferred Liabilities	\$ 430,424 53	\$ 396,709 73
UNADJUSTED CREDITS Insurance Reserves	\$ 50,000 00 241,978 03 652,689 47	\$ 50,000 00 523,079 07 510,569 69
Total Unadjusted Credits	\$ 944,667 50	\$ 1,083,648 76
SURPLUS Additions to Property through Income since June 30, 1907 Funded Debt Retired through Income and Surplus Sinking Fund Reserves Miscellaneous Fund Reserves Appropriated Surplus — Purchase of Leased Line Bonds	\$ 14,822,146 85 16,603,961 37 56,621 04 988,296 77	\$ 14,822,146 85 15,890,805 53 37,309 09 1,053,626 14 357,000 00
Total Appropriated Surplus	\$ 32,828,026 03 598,088 04 1,388,698 53	\$ 32,160,887 61 598,088 04 d 756,707 36
Total Surplus	\$ 34,814,812 60	\$ 32,002,268 29
Grand Total	\$268,678,034 02	\$263,229.337 67

<sup>(</sup>a) Includes Surplus Earned by Lessor Companies before Consolidation. d Indicates Debit Balance.

# Income Account

	Year ended Dec. 31, 1947	Increase or Decrease	Per Cent
Thankshopmannov Promover			
Transportation Revenue Freight	\$61,259,600 94 15,225,632 77	\$7,492,667 06 d 1,529,350 06	13.94 9.13
Excess Baggage	18,669 58	1,372 42 9,551 56	7.93 16.46
Parlor and Chair Car	48,479 09 1,687,030 60	343,833 82	25.60
Express	1,089,053 66	802,765 55	280.40
Other Passenger-Train	323,941 70 1,259,086 04	49,168 77 54,423 13	17.89 4.52
Milk	719,363 23	93,812 18	15.00
Total Transportation			
Revenue	\$81,630,857 61	\$7,299,141 31	9.82
Incidental Revenue Dining and Buffet	\$ 258,968 28	\$ 5,762 86	2.28
Station and Train Privileges .	163,791 68	d 21,059 88	11.39
Parcel Room	33,140 20	d 16,614 10	33.39
Storage — Freight	57,643 59	8,007 05	16.13
Storage — Baggage	5,684 02	d 321 22	5.35
Demurrage	418,588 69 36,777 17	d 38,172 24 d 3,938 77	8.36 9.67
Telegraph and Telephone	19,503 45	11,450 20	142.18
Power	72,206 13	9,123 31	14.46
Rents of Buildings and Other	1 072 066 20	. 110 7/11 66	9.58
Property	1,073,066 20 331,305 98	d 113,741 66 d 8,938 63	2.68
Total Incidental Revenue .	\$ 2,470,675 39	d\$ 168,443 08	6.38
Joint Facility — Cr	\$ 182,272 93	d\$ 22,018 67	10.78
Joint Facility — Dr	6,666 28	d 1,310 38	16.43
Total Joint Facility Operating Revenue	\$ 175,606 65	d\$ 20,708 29	10.55
Total Operating Revenues	\$84,277,139 65	\$7,109,989 94	9.21
OPERATING EXPENSES  Maintenance of Way and			
Structures	\$13,621,871 99	\$ 631,549 80	4.86
Maintenance of Equipment .	12,940,046 14	242,838 30	1.91
Traffic	1,212,319 02	60,522 04 1,197,255 29	5.25 3.52
Transportation	35,183,878 45 365,218 25	46,453 39	14.57
General	3,161,286 61	179,678 28	6.03
Total Operating Expenses Operating Ratio	\$66,484,620 46 (78.89%)	\$2,358,297 10 d (4.21%)	3.68
		\$4,751,692 84	36.44
Net Operating Revenue	\$17,792,519 19	94,731,092 04	30.44

# Income Account (Continued)

	Year ended Dec. 31, 1947	Increase or Decrease	Per Cent
TAX ACCRUALS	\$8,271,598 51	\$3,184,447 87	62.60
Operating Income	\$9,520,920 68	\$1,567,244 97	19.70
Rent from Locomotives Rent from Passenger-Train	\$ 31,436 78	d\$ 27,046 39	46.25
Cars	561,650 13	d 89,175 57	13.70
Rent from Work Equipment.	7,228 43	d 8,233 20	53.25
Joint Facility Rent Income .	353,402 82	d 728 19	.21
Total Rent Income	\$ 953,718 16	d\$ 125,183 35	11.60
Hire of Freight Cars — Debit	***************************************		
Balance	\$3,244,693 84	d\$ 28,631 98	.87
Rent for Locomotives	1,772 02	d 555 31	23.86
Rent for Passenger-Train Cars	644,656 27	12,041 51	1.90
Rent for Work Equipment	4,604 51	2,386 32	107.58
Joint Facility Rents	648,394 63	23,278 14	3.72
Total Rents Payable	\$4,544,121 27	\$ 8,518 68	. 19
Net Rents Payable	\$3,590,403 11	\$ 133,702 03	3.87
Net Railway Operating Income	\$5,930,517 57	\$1,433,542 94	31.88
Other Income Income from Lease of Road			
and Equipment	\$ 4,446 91	d\$ 266,364 92	98.36
Miscellaneous Rent Income . Miscellaneous Nonoperating	300,472 94	d 3,387 28	1.11
Physical Property	16,752 92	10,187 78	155.18
Dividend Income	13,788 50		85.01
Income from Funded Securi-	13,700 30	d 78,185 50	00.01
ties	311,674 92	d 109,772 96	26.05
curities and Accounts Income from Sinking and	65,853 62	d 94,043 02	58.81
Other Reserve Funds	47,338 35	d 20.692 51	30.42
Miscellaneous Income	59,757 00	11,198 45	23.06
Total Other Income	\$ 820,085 16	d\$ 551,059 96	40.19
Total Income	\$6,750,602 73	\$ 882,482 98	15.04

# Income Account (Concluded)

	Year ended Dec. 31, 1947	Increase or Decrease	Per Cent
MISCELLANEOUS DEDUCTIONS FROM INCOME Miscellaneous Rents Miscellaneous Tax Accruals	\$ 9,543 67 9,000 00	\$ 188 96	2.02
Miscellaneous Income Charges Income Applied to Sinking and	17,616 38	d 3,418 56	16.25
Other Reserve Funds	45,881 38	d 30,230 10	39.72
Total Miscellaneous De- ductions	\$ 82,041 43	a\$ 33,459 70	28.97
Income Available for Fixed Charges	\$6,668,561 30	\$ 915,942 68	15.92
Fixed Charges Rent for Leased Roads Interest on Funded Debt—	\$ 688,870 32	d\$ 282,836 20	29.11
Fixed Interest	2,733,912 90 20,235 23	d 39,896 38 8,128 68	1.44 67.14
Funded Debt	29,311 36	d 1,036 85	3.42
Total Fixed Charges	\$3,472,329 81	d\$ 315,640 75	8.33
Income after Fixed Charges (Available Net Income).	\$3,196,231 49	\$1,231,583 43	62.69
Contingent Charges Sinking Fund — Series RR Bonds	\$ 679,102 00	_	
Contingent Interest Sinking Fund — Series A Bonds	1,215,180 02 53,365 79	d \$ 36,222 18 19,221 93	
Total Contingent Charges .	\$1,947,647 81	d\$ 17,000 25	
Net Income after Fixed Charges and Other De- ductions, transferred to Profit and Loss	\$1,248,583 68	\$1,248,583 68	

d Indicates decrease.

## Operating Expenses

	Year ended Dec. 31, 1947		ncrease or Decrease
MAINTENANCE OF WAY AND STRUCTURES			
Superintendence	\$ 811,364 80	S	36,286 15
Roadway Maintenance	1,156,472 00		134,088 78
Tunnels and Subways	41,871 89		12,699 62
Bridges, Trestles and Culverts	262,672 61	d	44,442 02
Ties	564,698 09		185,089 63
Rails	10,865 31	d	285,913 97
Other Track Material	301,804 99	d	142,178 85
Ballast	152,767 21		83,889 29
Track Laying and Surfacing	3,410,352 47		1,357 63
Fences, Snowsheds and Signs	74,726 65		23,137 80
Station and Office Buildings	590,342 89	d	44,628 87
Roadway Buildings	58,194 26	d	653 04
Water Stations	56,735 01	d	10 01 101
Fuel Stations	39,384 90	d	
Shops and Enginehouses	495,505 18	-	9,785 48
Grain Elevators	27,174 21	d	10,540 80
Storage Warehouses	2,001 47		16,470 18
			1,029 71
Wharves and Docks	22,803 70	d	32,056 96
Coal and Ore Wharves	22,174 72	d	22,129 09
Telegraph and Telephone Lines	76,654 90		7,194 77
Signals and Interlockers	937,137 74		34,609 80
Power Plants	5,627 86	d	4,231 89
Power-Transmission Systems	49,787 73	d	12,917 72
Miscellaneous Structures	608 55	d	863 25
Road Property — Depreciation	1,634,856 96	d	5,316 00
Retirements — Road	341,784 43		191,814 83
Roadway Machines	169,612 81		46,070 75
Dismantling Retired Road Property .	116,079 56		63,613 31
Small Tools and Supplies	209,481 30		35,049 89
Removing Snow, Ice and Sand	1,209,786 82		365,663 93
Public Improvements — Maintenance	258,337 25		55,413 72
Injuries to Persons	116,060 46		33,566 07
Insurance	28,162 52		8,627 22
Stationery and Printing	11,664 54		1,963 29
Other Expenses	9,918 39	d	14,331 54
Maintaining Joint Tracks, Yards and			-1, 04
Other Facilities — Dr	475,190 33	d	85,301 70
Maintaining Joint Tracks, Yards and			-5,001 10
Other Facilities — Cr	64,712 46	d	21,952 60
Total Maintenance of Way and			
Structures	\$13,621,871 99	S	631,549 80
Ratio to Total Operating Revenues .	(16.16%)	d	(.67%)

d Indicates decrease.

# Operating Expenses (Continued)

	Year ended Dec. 31, 1947	Increase or Decrease	
Maintenance of Equipment Superintendence	\$ 598,579 64 315,531 10 63,203 63	\$ 16,333 04 d 3,585 42 13,756 37	
Shop and Power-Plant Machinery — Depreciation	97,236 00	72 00	
Plant Machinery Steam Locomotives — Repairs Other Locomotives — Repairs Freight-Train Cars — Repairs Passenger-Train Cars — Repairs Work Equipment — Repairs Miscellaneous Equipment — Repairs Dismantling Retired Equipment Retirements — Equipment Equipment — Depreciation Equipment — Amortization of Defense Projects Injuries to Persons Insurance Stationery and Printing Other Expenses	46 54 3,647,200 15 1,854,101 42 1,858,334 41 2,162,284 02 309,102 84 17,055 00 56,663 59 	d 394 24 d 555,952 49 497,696 75 d 189,934 14 279,258 64 34,961 02 d 10,312 15 27,306 31 1,400 00 68,357 70  151 00 24,113 49 14,965 40 2,045 48 61,521 51	
Maintaining Joint Equipment at Terminals — Dr	117,447 53	d 39,171 66	
minals — Čr	7,697 71	d 249 69	
Total Maintenance of Equipment . Ratio to Total Operating Revenues .	\$12,940,046 14 (15.36%)	\$ 242,838 30 d (1.10%) \$	
Traffic Superintendence Outside Agencies Advertising Traffic Associations Industrial and Immigration Bureaus Insurance Stationery and Printing	\$ 442,738 23 391,005 94 260,050 06 49,018 04 18,164 17 18 48 51,324 10	\$ 7,761 13 19,305 05 20,369 24 1,264 64 1,113 86 d 2 40 10,710 52	
Total Traffic	\$ 1,212,319 02 (1.44%)	\$ 60,522 04 d (.05%)	

d Indicates decrease.

## Operating Expenses (Continued)

	Year Ended Dec. 31, 1947	Increase or Decrease
TRANSPORTATION		
Superintendence	\$ 826,265 65	0 0-00-10
Dispatching Trains	\$ 826,265 65 311,759 21	d\$ 25,865 12
Station Employees		d 4,299 72
Weighing Inspection and Democratic	6,147,660 11	239,865 74
Weighing, Inspection and Demurrage	20 440 00	40.400 00
Bureaus	32,110 03	10,438 79
Station Supplies and Expenses	515,938 14	27,292 49
Yardmasters and Yard Clerks	1,026,021 98	73,745 74
Yard Conductors and Brakemen	2,058,595 68	40,551 21
Yard Switch and Signal Tenders	312,578 78	9,479 58
Yard Enginemen	545,548 46	d 102,228 41
Yard Motormen	638,530 55	88,430 97
Yard Switching Fuel	545,118 72	d 33,106 21
Water for Yard Locomotives	13,802 43	d 3,556 83
Lubricants for Yard Locomotives	21,795 72	d 1,167 66
Other Supplies for Yard Locomotives .	14,524 51	471 16
Enginehouse Expenses — Yard	288,185 97	d 10,045 18
Yard Supplies and Expenses	79,090 97	5,046 65
Operating Joint Yards and Terminals		
— Dr	2,176,351 62	d 19,298 27
Operating Joint Yards and Terminals		
— Cr	386,935 08	14,341 88
Train Enginemen	2,001,956 93	d 362,063 14
Train Motormen	1,176,889 87	343,315 00
Train Fuel	4,118,691 69	93,048 17
Train Power Purchased		d 72,446 36
Water for Train Locomotives	123,761 67	d 14,748 13
Lubricants for Train Locomotives	207,576 43	30,456 85
Other Supplies for Train Locomotives .	107,182 65	25,262 51
Enginehouse Expenses — Train	1,580,451 33	9,205 02
Trainmen	4,561,811 49	157,118 98
Train Supplies and Expenses	2,049,650 45	99,447 42
Signal and Interlocker Operation	574,314 42	
Crossing Protection	1,406,107 19	d 2,886 38
Drawbridge Operation		89,911 67
Telegraph and Telephone Operation .	43,831 85	3,726 48
Stationery and Printing	51,399 37	d 120 21
Other Expenses	181,305 90	26,406 64
Other Expenses	49,599 12	d 3,064 86
Operating Joint Tracks and Facilities	25 500 06	440 54
— Dr	35,700 86	110 74
Operating Joint Tracks and Facilities	(2 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	
— Cr	63,777 47	d 1,119 93
Insurance	13,615 39	2,226 41
Clearing Wrecks	75,494 67	11,254 74
Damage to Property	23,032 86	d 4,494 70
Damage to Live Stock on Right of Way	1,831 63	d 2,771 83
Loss and Damage — Freight Loss and Damage — Baggage	1,064,623 96	252,056 25
Loss and Damage — Baggage	5,174 06	d 3,532 02
Injuries to Persons	626,708 68	237,303 06
m . 1 m		
Total Transportation	\$35,183,878 45	\$1,197,255 29
Ratio to Total Operating Revenues .	(41.75%)	a (2.29%)

#### Operating Expenses (Concluded)

	Year ended Dec. 31, 1947	Increase or Decrease
MISCELLANEOUS OPERATIONS Dining and Buffet Service Grain Elevators Other Miscellaneous Operations	\$ 335,165 29 30,035 70 17 26	\$ 35,350 79 11,093 62 8 98
Total Miscellaneous Operations Ratio to Total Operating Revenues .	\$ 365,218 25 (.43%)	\$ 46,453 39 (.01%)
General Salaries and Expenses of General Officers Salaries and Expenses of Clerks and Attendants General Office Supplies and Expenses Law Expenses Law Expenses Insurance Pensions Stationery and Printing Valuation Expenses Other Expenses General Joint Facilities — Dr	\$ 204,392 62 2,124,592 56 159,477 61 174,430 30 760 63 261,979 94 64,029 40 36,145 12 111,842 18 23,636 25	81,610 44 12,671 80 6,348 54 d 17 26 86,361 43 1,868 40 1,334 28 d 8,856 82 2,900 26
Total General	\$ 3,161,286 61 (3.75%)	\$ 179,678 28 d (.11%)
Total Operating Expenses	\$66,484,620 46 (78.89%)	\$2,358,297 10 d (4.21%)

d Indicates decrease.



New Lowell Tower looking north. Contains the largest centralized traffic control machine on the Boston and Maine system.



MULTIPLE ELECTRIC TAMPER - 12 TOOL MODEL

By use of this modern machine the efficiency of the tamping operations is increased about 250%.

## Capital Stock and Long-Term Debt Outstanding

CAPITAL STOCK	Amount Outstanding	Dividend Rate
Prior Preference Prior Preference Negotiable Receipts First Preferred Class A  " " B  " " C  " " D  " " E  Preferred.	\$ 23,136,000 00 2,500 00 18,860,000 00 7,648,800 00 7,917,100 00 4,327,000 00 65,000 00 3,149,800 00 39,505,100 00 \$104,611,300 00	7 % 5 % 8 % 7 % 10 % 4½% 6 %
Long-Term Debt		mount standing
Bonds secured by Mortgage dated Decembers supplemented as of July 1, 1940  Series II	\$ 1, 58, 3, 29, \$ 93,	25,000 00 237,000 00 434,400 00 902,000 00 065,000 00 979,000 00 642,400 00 348,000 00 192,429 78
· Grand Total Long-Term Debt	\$105,	182,829 78

Cumulative Dividends U Since †Jan. 1, 1932–*Oct.		Amount in Hands of Public	Owned, Deposited with Trustee, or Held in Treasury**
*\$113 75 " " 8,99 *\$162 50 " " 7,02		\$ 22,938,900 00 2,500 00 18,834,100 00 7,648,800 00 7,910,300 00 4,323,900 00 65,000 00 3,149,800 00 39,472,800 00	\$ 197,100 00 25,900 00 6,800 00 3,100 00 32,300 00
		\$104,346,100 00	\$ 265,200 00
Date of Maturity	Rate		
July 1, 1950 May 1, 1955 July 1, 1960 April 1, 1961 September 1, 1967 July 1, 1970  June-Dec. 1, 1948-49 Various	3 % 5 % 4 % 4 % 5 % 41/2% 4 % Various	\$ 10,000 00 1,237,000 00 56,847,400 00 897,000 00 2,424,000 00 26,630,000 00 \$ 88,045,400 00 348,000 00 11,192,429 78	a \$ 15,000 00 1,587,000 00 a 5,000 00 a 641,000 00 3,349,000 00 \$5,597,000 00
		\$ 99,585,829 78	\$5,597,000 00

<sup>\*\*</sup> No interest.

a Deposited with and held by Trustee in Lieu of Mortgaged Property Sold, to release would require cash payment at par.

CAPITAL STOCK	Amount Outstanding	Dividend Rate (Paid as rental)	Owned, Deposited with Trustee, or Held in Treasury or Insurance Fund
Stony Brook	\$ 300,000 00	7%	\$ 31,700 00
Northern	3,068,400 00 3,193,000 00	6%	880,000 00 326,600 00
	1,000,000 00	070	1,000,000 00
Vermont Valley Sullivan County	a 500,000 00	_	1,000,000 00
Total Capital Stock	\$8,061,400 00		\$2,238,300 00

a All owned by Vermont Valley Railroad.

Funded Debt	Bonds Outstanding	Date of Maturity	Rate	Owned, Deposited with Trustee, or Held in Treasury or Insurance Fund
Sullivan County First Mortgage Vermont Valley First Mortgage	\$357,000 00 352,000 00	April 1, 1944 Oct. 1, 1955	6%	*\$357,000 00
Total Funded Debt	\$709,000 00			\$357,000 00

 $<sup>^{\</sup>ast}$  These bonds have matured and are held as an overdue obligation of the Sullivan County Railroad.

#### Miles of Road Operated, December 31, 1947

STEAM ROADS	Owned	Leased	Total
Main Lines	 827 68 655 27	187 20 4 79 82 22	1,014 88 660 06 82 22
Total Road Operated	 1,482 95 463 99 4 11 913 54	274 21 a 114 17 b 5 44 113 41	1,757 16 578 16 9 55 1,026 95
Total Track Operated	 2,864 59	507 23	3,371 82

a Includes trackage rights 14.47 miles, b Includes trackage rights .99 mile.

## Earned Surplus — December 31, 1947

Item	Debit		Credit		
Balance, December 31, 1946 (Debit)	(a)\$ 756,707	36			
Credit Balance from Income Account for year 1947			\$1,248,583	68	
Adjustment to Par of Boston and Maine Railroad Bonds purchased during 1947			542,554	14	
Profit on Retired Miscellaneous Property Sold			336,266	06	
Profit on sale of Boston Garden-Arena Corporation Capital Stock			18,980	09	
Miscellaneous Debits — Net	978	08			
Credit Balance, December 31, 1947	(a) 1,388,698	53			
	\$2,146,383	97	\$2,146,383	97	

(a) Includes Surplus Earned by Lessor Companies before Consolidation.



Interior of new Diesel Shop at Boston.

#### Additions and Betterments (Operating Property) — December 31, 1947

Doin	TITLE ACCOUNT	Gross Expenditures	Property Retired	Net Capital Changes
ROAD 1 2 2½ 3 6 8 9 10 11 12 13 16 17 18	Engineering Land for Transportation Purposes Other Right-of-Way Expenditures Grading Bridges, Trestles and Culverts Ties Rails Other Track Material Ballast Track Laying and Surfacing Fences, Snowsheds and Signs Station and Office Buildings Roadway Buildings Water Stations Fuel Stations	\$ 127,306 96 25,936 70 643 00 273,508 29 340,526 58 113,895 44 247,381 20 378,106 40 30,801 44 130,219 12 16,268 09 243,973 59 3,772 75 4,162 37 116,521 14		co.
29 20 21 23 26 27 29 31 35 37 38 39	Shops and Enginehouses Grain Elevators	810,230 73  —  9,591 00  728,097 66  29,296 41  59,531 66  164 17  128,151 63  9,168 17  62,496 77  162,009 88  62,500 15	286,458 02 27,913 74 94,346 00 201 24 352,061 28 15,438 45 34,550 58 	523,772 71 27,913 74 94,346 00 9,389 76 376,036 38 13,857 96 24,981 08 164 17 70,808 33 7,823 35 46,686 70 139,228 01 56,635 51
EQUIP: 51 52 53 54 57 58	Total Road  MENT Steam Locomotives Other Locomotives Freight-Train Cars Passenger-Train Cars Work Equipment Miscellaneous Equipment Total Equipment	\$4,114,261 30 18,382 86 189,339 98 2,160,582 75 1,451,706 29 379,767 46 10,383 33 \$4,210,162 67	\$3,230,118 79 2,777,045 77 75,097 09 1,242,547 10 426,486 04 94,380 81 10,148 14 \$4,625,704 95	\$ 884,142 51 2,758,662 91 114,242 89 918,035 65 1,025,220 25 285,386 65 235 19 \$ 415,542 28
GENER 72 73 74 75 76 77	RAL EXPENDITURES General Officers and Clerks	5,650 77 3,445 25 687 91 1,929 58 44,412 02 1,240 73 \$ 57,366 26 \$8,381,790 23	5,784 00 3,411 58 378 00 1,967 00 88,443 14 1,335 00 \$ 101,318 72 *\$7,957,142 46	133 23 33 67 309 91 37 42 44,031 12 94 27 \$ 43,952 46 \$ 424,647 77

#### \* DISPOSITION OF CREDITS

Account No.							
701 — Road and Equipment Property — Equipment Convert	ted			 	 		\$ 270,141 10
702 1/2 — Accrued Depreciation — Road and Equipment		 		 	 		4,837,273 95
708 — Cash — Land, Rail, etc. Sold							
716 — Material and Supplies — Usable Material							146,197 54
531 — Operating Expenses		 					511,180 45
621 — Profit and Loss — Miscellaneous Debits							82,844 56
Total Amount credited to Investment in Road and Equipment							\$7,957,142 46

Note. — "Gross Expenditures" includes Journal Entries amount \$1,064,485.47 to conform with Interstate Commerce Commission accounting requirements in connection with the acquisition of the Pemigewasset Valley Railroad — \$694,960.39, and the Turners Falls Branch — \$369,525.08.

#### Operating Statistics

Average Miles of Road Operated   1,748,47   2,40   Passenger Service   1,408.21   1,09   1,000   1,0		Year Ended Dec. 31, 1947	
TRAIN MILEAGE	Freight Service		
Freight service (with locomotives)   3,839,975   13,372   2,938   226,784   1,600   246,784   41,693   41,693   41,674   41,693   41,674   41,693   41,674   41,693   41,674   41,693   41,674   41,693   41,674   41,693   41,674   41,693   41,674   42,613   42,613   42,613   42,613   43,613	Total	1,760.64	2.47
*LOCOMOTIVE MILEAGE Freight service Passenger service 7,009,942 77,108 727,108 7308,376 15,216 Yard switching 2,567,340 137,472 Work service 14,284,530 190,789  CAR MILEAGE Freight-Train Car Miles: Loaded 143,484,601 143,4	Freight service (with locomotives)  Passenger service (with locomotives)  Passenger service (without locomotives)	6,767,781 226,784	1,600 41,693
Freight service	Total train miles	11,027,771	15,247
CAR MILEAGE   Freight-Train Car Miles:   Loaded   2,040,712   Empty   54,895,692   1,930,081   40,998	Freight service Passenger service Train switching Yard switching Work service	7,009,942 308,376 2,567,340 279,411	77,108 15,216 137,472 51,188
Freight-Train Car Miles:		14,204,330	100,700
Passenger-Train Car Miles:       21,211,513       2,026,293         Sleeping and parlor cars       3,777,352       99,731         Club, lounge, dining and observation cars       307,062       15,930         Business cars       12,123       3,764         Mail, express, and baggage cars, and combination cars other than passenger       15,996,824       16,687         Combination passenger cars (mail, express, or baggage with passenger)       4,585,581       131,650         Total passenger-train car miles       45,890,455       1,989,853         Total transportation service car miles       248,182,623       6,001,644         AVERAGES       Operating revenues per mile of road       37,761.62       1,390.48         Net railway operating income per mile of road       3,368.39       817.80         Operating expenses per train mile       57.78       68         Operating expenses per train mile       55       14         Net railway operating income per train mile       51.66       1.22         Net railway operating income per train mile       51.66       1.22         Loaded freight cars per revenue train mile       37.37       66         Empty freight cars per revenue train mile       14.30       -55	Freight-Train Car Miles: Loaded	54,895,692	1,930,081
Passenger coaches       21,211,513       2,026,293         Sleeping and parlor cars       3,777,352       99,731         Club, lounge, dining and observation cars       12,123       307,062       15,930         Business cars       12,123       3,764         Mail, express, and baggage cars, and combination cars other than passenger.       15,996,824       16,687         Combination passenger cars (mail, express, or baggage with passenger)       4,585,581       131,650         Total passenger-train car miles       45,890,455       1,989,853         Total transportation service car miles       248,182,623       6,001,644         AVERAGES       Operating revenues per mile of road       37,761.62       1,390.48         Net railway operating income per mile of road       3,368.39       817.80         Operating expenses per train mile       57.78       68         Operating expenses per train mile       55       14         Net railway operating income per train mile       55       14         Total freight cars per revenue train mile       51.66       1.22         Loaded freight cars per revenue train mile       37.37       .66         Empty freight cars per revenue train mile       14.30       .55	Total freight-train car miles	202,292,168	4,011,791
Combination passenger cars (mail, express, or baggage with passenger)         4,585,581         131,650           Total passenger-train car miles         45,890,455         1,989,853           Total transportation service car miles         248,182,623         6,001,644           AVERAGES         Operating revenues per mile of road         \$47,867,33         \$4,099,70           Operating expenses per mile of road         37,761,62         1,390,48           Net railway operating income per mile of road         3,368,39         817,80           Operating revenues per train mile         \$7,78         68           Operating expenses per train mile         6.14         24           Net railway operating income per train mile         55         14           Total freight cars per revenue train mile         51,66         1,22           Loaded freight cars per revenue train mile         37,37         66           Empty freight cars per revenue train mile         14,30         55	Passenger coaches Sleeping and parlor cars Club, lounge, dining and observation cars Business cars Mail, express, and baggage cars, and combination cars other than passenger	3,777,352 307,062 12,123	99,731 15,930 3,764
Total transportation service car miles  AVERAGES Operating revenues per mile of road Operating expenses per mile of road Net railway operating income per mile of road Operating revenues per train mile Operating expenses Operating revenues per mile of road Operating expenses per m	Combination passenger cars (mail, express, or baggage with	4,585,581	131,650
Averages Operating revenues per mile of road Operating expenses per mile of road Net railway operating income per mile of road Operating revenues per train mile Operating revenues per train mile Operating expenses per mile of road Operating exp	Total passenger-train car miles	45,890,455	1,989,853
AVERAGES Operating revenues per mile of road Operating expenses per mile of road Net railway operating income per mile of road Operating revenues per train mile Operating expenses per mile of road Operating exp	Total transportation service car miles	248,182,623	6,001,644
Operating expenses per train mile	Averages Operating revenues per mile of road Operating expenses per mile of road	37,761.62	1,390.48
Loaded freight cars per revenue train mile	Operating expenses per train mile	6.14	24
Total passenger cars per train mile 6.56	Loaded freight cars per revenue train mile	37.37	.66
	Total passenger cars per train mile	6.56	. 24

<sup>\*</sup> Includes 6,350,876 Diesel locomotive miles. Italics indicate decrease.

#### Traffic Statistics

	Year Ended Dec. 31, 1947	Increase or Decrease
FREIGHT	0 (1.250 (01	0 7 102 ((7
Freight Revenue	\$ 61,259,601 23,892,658	\$ 7,492,667
Tons of company freight carried	1,468,340	271,966 128,320
Total tons of freight carried	25,360,998	143,646
Tons of revenue freight carried one mile	3,688,980,389 125,207,753	26,347,569 18,278,887
Total tons of freight carried one mile	3,814,188,142	44,626,456
Passenger Passenger Revenue: Monthly commutation ticket passengers All other commutation ticket passengers Single fare ticket passengers (not including interline) Interline ticket passengers.	\$ 1,108,019.52 1,523,337.12 7,717,835.97 4,876,440.16	\$ 81,864.98 34,117.14 951,166.74 694,165.44
Total passenger revenue	\$15,225,632.77	\$1,529,350.06
Number of Passengers Carried: Monthly commutation ticket passengers All other commutation ticket passengers Single fare ticket passengers (not including interline) Interline ticket passengers  Total number of passengers carried	4,858,450 8,408,206 10,948,072 2,103,991 26,318,719	301,819 170,105 2,620,334 606,685 3,095,305
Number of Passengers carried one mile:  Monthly commutation ticket passengers All other commutation ticket passengers Single fare ticket passengers (not including interline) Interline ticket passengers  Total number of passengers carried one mile	118,451,453 83,842,385 337,011,536 191,633,232 730,938,606	7,342,682 1,632,327 81,027,439 59,923,446 135,240,530
Number of passengers to and from Boston, including monthly ticket passengers	23,195,267	2,170,600
Averages Freight: Miles hauled — revenue freight Tons of revenue freight per train mile Tons of revenue freight per train mile Revenue per ton of freight Revenue per ton per mile Revenue per ton per mile Revenue per revenue train mile Freight revenue per loaded car mile Passenger:	154.40 960.68 25.71 \$ 2.56395 1.661 \$ 15.953 42.694	\$ .89 10.24 .18 \$ .28769 .214 \$ 1.902 5.747
Average distance carried per passenger (miles)  Number of passengers per train mile  Number of passengers per car mile  Revenue per passenger	27.77 104.50 24.72 57.85 0.935 1.817 2.290 2.545 2.083 51.482 \$ 2.810	1.68 18.57 2.72 .89 .011 .075 .216 .331 .149 1.592 .023
Revenue per passenger mile, single fare not including interline (cents) Revenue per passenger mile, interline passengers (cents) Revenue per passenger mile, all passengers	2.3 2.3 2.0 51.4	290 545 083 482

Italics indicate decrease

